

Long term smoking leads to COPD. COPD is the fifth leading cause of death in America. Therefore, we can say that smoking contributes to the fifth leading cause of death in the United States, and that is not even considering the MI (smoking may double the risk of CAD), CVA, and cancer risks associated with smoking.

This patient population may have signs and symptoms of COPD, such as a chronic productive cough, dyspnea on exertion, and excessive airway secretions. Pulmonary function tests can be helpful in formulating the anesthetic plan and guiding therapy. The only true treatment for COPD is smoking cessation.

Cigarette smoke is packed full of harmful compounds. One of particular interest to the anesthetist is carbon monoxide (CO). It binds to hemoglobin with 200 times greater affinity than oxygen. The elimination half life of CO is 4-6 hrs. Therefore, smoking cessation for 12-18 hr will significantly decrease the carboxyhemoglobin levels in the blood. This will positively impact the ability of the anesthetist to oxygenate the patient by allowing a greater saturation of the hemoglobin molecule with O₂.

Smoking also damages the ciliary mucus escalator. It takes several weeks for the ciliated respiratory epithelium to regain function. One study indicated that it took up to 8 weeks to decrease pulmonary complications post CABG after smoking cessation.

Stoelting RK, Dierdorf SF. Anesthesia & Co-Existing Diseases. 5th ed. New York, NY: Churchill-Livingston; 2008: 171-180.